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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.          | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------------|------------------|
| 10/828,570   | 04/20/2004  | Hung-ying Tyan       | 073338.0200 (04-51121<br>FLA | 5277             |
| 5073   | 7590        | 11/20/2007           | EXAMINER                     |                  |
| BAKER BOTTS L.L.P.<br>2001 ROSS AVENUE<br>SUITE 600<br>DALLAS, TX 75201-2980 |             |                      | WANG, QUAN ZHEN              |                  |
|  |             |                      | ART UNIT                     | PAPER NUMBER     |
|  |             |                      | 2613                         |                  |
|  |             |                      | NOTIFICATION DATE            | DELIVERY MODE    |
|  |             |                      | 11/20/2007                   | ELECTRONIC       |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

Application No.

10/828,570

Applicant(s)

TYAN ET AL.

Examiner

Quan-Zhen Wang

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-15,17-23,25-31 and 33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-15,17-23,25-31 and 33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 19, 2007 has been entered.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 17-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The preamble of claims 17-24 recites "logic for managing network traffic, the logic encoded in computer readable media and operable when executed". It appears the logic as recited are executable instructions, therefore, they are software. Software or program per se is non-statutory subject matter. See MPEP §2106.01.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-2, 4-7, 9-10, 12-15, 17-18, 20-23, 25-26, 28-31, and 33 are rejected under 35 U.S.C. 102(a) as being anticipated by Chang et al. (U.S. Patent Application Publication US 2003/0117678 A1).

Regarding claims 1, 9, 17, 25, and 33, Chang discloses a system (figs. 1-5, 36A-36B) for managing network traffic, comprising: an internet protocol network (fig. 1, network 110; fig. 36A: network formed by the IP routers) for communicating traffic, the IP network comprising a plurality of nodes coupled by IP links (fig. 1, node 111 and 112; fig. 36A, the link between the IP nodes (routers)); a wavelength division multiplex (WDM) topology coupled to the IP network (fig. 1, network 120), the WDM topology comprising a plurality of lightpaths (fig. 1, the paths connecting node 1-node5) operable to communicate optical traffic; and a controller (figs. 2-3, NC&M) operable to: provision the IP network for communicating traffic; monitor the IP network for a congestion event; upon detecting a congestion event, select a label switched path (LSP) of the IP network for reroute (paragraph 0113); compute a hybrid path route for the selected LSP between a first node and a second node of the plurality of nodes, the hybrid path route comprising at least one IP link (fig. 36A, the IP link between the IP nodes (routers) and at least one lightpath of the WDM topology (fig. 36A, the WDM links with in 3625); determine whether performance of the hybrid path route for the selected LSP reduces costs (for example, paragraph 0105); and if the hybrid path route reduces costs: activate a new IP link on each of the at least one lightpaths of the plurality of lightpaths

of the WDM topology; and reroute the selected LSP according to the hybrid path route (for example, paragraphs 0101-0109).

Regarding claims 2, 10, 18, and 26, Chang further discloses that the controller is further operable to decommission an idle IP link after rerouting the selected LSP (for example, paragraph 0113).

Regarding claims 4, 12, 20, and 28, Chang further discloses that the controller operable to account for a cost associated with each IP link and each lightpath of the hybrid path route (for example, paragraph 0105).

Regarding claims 5, 13, 21, and 29, Chang further discloses that a controller operable to activate a new IP link on each of the at least one lightpaths of the plurality of lightpaths of the WDM topology comprises a controller operable to: allocate an unused router port on each end of each of the at least one lightpaths; and activate the allocated router ports with respective established lightpaths (for example, paragraphs 0105 and 0113).

Regarding claims 6, 14, 22, and 30, Chang further discloses that the IP network comprises an IP router (fig. 1, IP router 111).

Regarding claims 7, 15, 23, and 31, Chang further discloses that the WDM topology couples optical cross-connection of the WDM topology (fig. 1, optical network 120).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 11, 19, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (U.S. Patent Application Publication US 2003/0117678 A1) in view of Pieda et al. (U.S. Patent US 6,882,627 B2).

Regarding claims 3, 11, 19, and 27, Chang differs from the claimed invention in that Chang does not specifically disclose using a transformed topology to calculate the hybrid path. However, using a transformed topology to calculate a path in a communication network is well known in the art. For example, Pieda discloses to calculate a path using a transformed topology (fig. 3C). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate the method of Pieda in the system of Chang to calculate a path using a transformed topology. One of ordinary skill in the art would have been motivated to do so in order to identify the best non-primary path through the network.

### ***Response to Arguments***

8. Applicant's arguments filed on May 25, 2007 have been fully considered but they are not persuasive.

***Regarding the 101 rejections***

Even though the amended claim 17 includes the phrase of “computer readable media”, the claimed subject matter is still “logic for managing network traffic”, which is non-statutory subject matter. See MPEP §2106.01. In accordance with MPEP, “When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized” (MPEP §2106.01). It is clear that only when the “functional descriptive material” “becomes structurally and functionally interrelated to the medium”, then it becomes statutory. For the instant case, what claimed in claim 17 is “logic for managing network traffic”. The claimed logic is not “structurally and functionally interrelated to the medium”, therefore, the claimed subject matter is non-statutory subject matter according to MPEP.

***Regarding the 102 rejections***

Regarding claim 1, Applicant argues that “network). Chang does not disclose using IP links when calculating routes or paths.” Examiner respectfully disagrees. According to the instant specification, “IP link” refers to the logical connection between nodes using Internet Protocol. Chang clearly and specifically illustrated the figures that the nodes are IP nodes (IP routers) and therefore the links between the IP nodes are IP links (see for example, figs. 1 and 36A). Applicant further argues “Chang does not disclose computing a hybrid path route for a selected label switched path (LSP)

between a first node and a second node of the plurality of nodes, the hybrid path route comprising at least one IP link and at least one lightpath of a wavelength division multiplex (WDM) topology coupled to the IP network". Examiner respectfully disagrees. As it is clearly and explicitly illustrated in the drawings (for example, figs. 36A and 36B), Chang's network comprises "the hybrid path route comprising at least one IP link and at least one lightpath of a wavelength division multiplex (WDM) topology coupled to the IP network". Therefore, the rejections of claim 1 and its dependent claims still stand.

Regarding claim 2, Applicant argues does not disclose decommissioning and idle IP link. Examiner respectfully disagrees. In accordance with MPEP, "The express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. 102 or 103. "The inherent teaching of a prior art reference, a question of fact, arises both in the context of anticipation and obviousness." In re Napier, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995) (affirmed a 35 U.S.C. 103 rejection based in part on inherent disclosure in one of the references). See also In re Grasselli, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed. Cir. 1983)" See MPEP §2112. For the instant case, Chang clearly and explicitly discloses that "the routing protocol performs the following functions: (a) measures network parameters, such as state of communication lines, estimated traffic, delays, capacity utilization, pertinent to the routing strategy; (b) forwards the measured information to NC&M 220 for routing computations; (c) computes of the routing tables at NC&M 220; (d) disseminates the routing tables to each network element 121-125 to have packet routing decisions at each network element. NC&M 220 receives the network parameter



information from each network element, and updates the routing tables periodically, then (e) forwards a connection request from an IP router such as element 111 to NC&M 220, and (f) forwards routing information from the NC&M 220 to each network element 121-125 to be inputted in optical signaling header 210.” Therefore, the controller obviously decommissions an idle IP link when it performs the computation of the routing tables. Applicant further argues, “A routing table simply matches a destination address with the network path to be used to reach the destination. Thus creating a routing table does not decommission an idle IP link”. Examiner respectfully disagrees. Firstly, the routing table of Chang is not simply matching a destination address with the network path to be used to reach the destination. In accordance to Chang, the routing table provides information of both available routing paths and the path used to reach destination. Secondly, the available paths that are not currently used reads on the claimed “idle link”. Therefore, the rejection of claim 2 still stands. For analogous reasons, the rejection of claims 10, 18, and 26 still stand.

Regarding claim 4, Applicant argues that, “Chang does not disclose determining whether performance of the hybrid path route for the selected LSP reduces costs for a cost associated with each IP link and each lightpath of the hybrid route”. Examiner respectfully disagrees with Applicant. In accordance with MPEP, “The express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. 102 or 103. “The inherent teaching of a prior art reference, a question of fact, arises both in the context of anticipation and obviousness.” In re Napier, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995) (affirmed a 35

U.S.C. 103 rejection based in part on inherent disclosure in one of the references). See also *In re Grasselli*, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed. Cir. 1983)" See MPEP §2112. For the instant case, Chang explicitly discloses that "each destination is associated with a preferred path which would minimize the cost", and the cost "is computed based on the total propagation distance, the number of hops, and the traffic load" (paragraph 0105). It is clear that the reduction of the costs in Chang read the claimed limitation of reducing costs comprises "accounting for a cost associated with each IP link and each lightpath of the hybrid path route". Furthermore, because Chang discloses hybrid paths in the network, the reduction of the costs of Chang reads on the claimed limitation of "determining whether performance of the hybrid path route for the selected LSP reduces costs comprises accounting for a cost associated with each IP link and each lightpath of the hybrid path route". Therefore, the rejection of claim 4 still stands. For analogous reasons, the rejection of claims 12, 20, and 28 still stand.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Liu (U.S. Patent Application Publication US 2003/0179716 A1) discloses a virtual IP network over reconfigurable WDM network. Kano et al. (U.S. Patent Application Publication US 2003/0043745 A1) disclose a path modifying, label switching node and administrative node in label transfer network.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan-Zhen Wang whose telephone number is (571)

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272-3114. The examiner can normally be reached on 9:00 AM - 5:00 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

qzw  
6/10/2007

  
Quan-Zhen Wang